Evaluation of BACE1 silencing as a therapy against Alzheimer disease

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Stellingen behorende bij dit proefschrift

BACE1 silencing as a therapy against Alzheimer disease: Implications for lipid metabolism and inflammatory responses

1. Protein aggregation is viewed as a key factor in Alzheimer disease but alterations in lipid metabolism and inflammatory responses are at least as important for the development and progression of this complex disease. (this thesis)

2. The targeted delivery of RNA interference molecules to silence BACE1 protein expression ameliorates learning and memory impairments in Alzheimer disease model mice. (this thesis)

3. The therapeutic effect of BACE1 silencing in Alzheimer disease model mice is depending on fatty acid desaturase enzyme activity. (this thesis)

4. Fatty acid length and saturation are important determinants of membrane characteristics including, signaling, fluidity, thickness and the local curvature, even molecular packaging, which is altered in Alzheimer disease and restored with BACE1 RNA interferent therapy. (this thesis)

5. Lipid profile composition is feasible biomarker to define a divergent pattern between Alzheimer disease types. (this thesis)

6. We can re-evaluate the role of the lipid composition of brain cells as a key player in Alzheimer disease development. (this thesis)

7. Life is like riding a bicycle. To keep your balance, you must keep moving.
Albert Einstein

8. No great mind has ever existed without a touch of madness.
Aristotle

9. If we knew what it was we were doing, it would not be called research, would it?
Albert Einstein

10. Fixation is the way to death. Fluidity is the way to life.
Miyamoto Musashi